DRAFT MEETING SUMMARY (v.1)

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HANFORD ADVISORY BOARD
RIVER AND PLATEAU COMMITTEE
November 7, 2001
Richland, WA

Topics in this Meeting Summary

This is only a summary of issues and actions in this meeting. It may not represent the fullness of ideas discussed or opinions given, and should not be used as a substitute for actual public involvement or public comment on any particular topic unless specifically identified as such.

Committee Business

The committee approved the August meeting summary, but Moses Jarassyi, Bechtel, still has comments for the October meting summary so the committee will consider adopting it on the next committee call.

Committee chair Pam Brown announced that she had heard Secretary of Energy's speech (he was in Richland for a short visit). She was impressed and encouraged. She had also indicated to one of his staff that although Congress has allocated Hanford enough money this year, it would need as much next year.

Facilitator Penny Mabie, EnviroIssues, announced that on Thursday morning, November 15th at 10:00 am there would be a conference call to discuss joint advice between the Budgets and Contracts Committee and River and Plateau Committee regarding the Department of Energy – Richland Operations Office (DOE-RL) Draft Request for Proposals (RFP) for the River Corridor Contract.

Hanford Reach National Monument

Harold Heacock is a member of the Hanford Reach Advisory Board as an alternate representative for the business community. The Board is Federal Advisory Committee

Act-chartered, with an open-ended existence. It has met three times, but is still getting organized. There are meetings scheduled two days a month through winter and part of next summer, but there is some question on the budget. The Board is composed of 13 members and 13 alternates, all closely focused, Hanford-area people. Six members are researchers or preservation-oriented and the rest are from local government.

When the Hanford Reach National Monument was established two years ago, the Fish and Wildlife Service (FWS) was not prepared to take it over. FWS now has to provide police and fire protection as well as manage the fish and wildlife, but lacks budget and staff. The function of the Board is to provide advice to FWS on management issues; the primary focus in the next three years is to develop a management plan. He noted that FWS is very sensitive to the Native Americans, especially along the river. There have not been any substantive discussions yet. Immediate issues of concern are deciding how to manage and control the sloughing at White Bluffs, the location of a visitor's center, the number and location of boat ramps, power lines within the Monument, and fire prevention.

Committee Discussion

- Maynard Plahuta asked which other agencies are involved. Harold mentioned that the Bonneville Power Administration (BPA), Army Corps of Engineers, and Bureau of Reclamation are all involved in issues of concern.
- Roger Stanley, Washington State Department of Ecology (Ecology), asked about the difference for the management plan for the Arid Lands Ecology (ALE) reserve. Harold said ALE is a research facility with no public access. The real issue is deciding land use within the monument.
- Dennis Faulk, Environmental Protection Agency (EPA), asked if the Board has discussed linking a visitor center and B Reactor museum. Harold thinks there is general agreement that a B Reactor museum should exist, but issues of funding and access must be resolved.
- Does the Board offer public comment? Yes, there is a public comment period. It is also possible to be included on the agenda.
- Jim Curdy offered an explanation of the sloughing of White Bluffs. Years ago the Bureau of Reclamation had a dump above White Bluffs that gave away at some point and started sloughing. The Bureau abandoned that system and stopped collecting water.
- Jim Curdy brought up the Columbia Basin Reclamation Project in relation to the transmission power lines in the Hanford Reach. However, Pam Brown noted that the issue could be discussed at a separate time.

Harold said there is a clause in the National Monument designation in which President Clinton sent a letter to the Secretary of Interior stating that DOE should consult with the Department of the Interior. Ultimately more DOE land will be turned over to FWS. He noted it as an issue for future DOE land use.

<u>Waste Management/NEPA Issues</u>

Mike Collins, DOE-RL, distributed a handout and updated the committee on the Burial Grounds Environmental Assessment (EA), Transuranic (TRU) Waste Retrieval EA, and Solid Waste Environmental Impact Statement (SW-EIS).

TRU Waste Retrieval EA

The TRU Retrieval EA would analyze TRU drums in the burial grounds to support the M-91-07 Tri-Party Agreement (TPA) milestone. The decision to retrieve has already been made; the EA analyzes the impacts of that decision in greater detail. The EA analyzes the retrieval of 15,000 containers in 5 years and only covers retrieval operations. There are 37,000 packages of suspect TRU material. For planning purposes, 50% is assumed to be low-level waste (LLW) and 50% is assumed to be TRU that will be sent to the Central Waste Complex (CWC). The retrieval scenario involves uncovering the drums, designating whether the contents are LLW or TRU, then disposing or shipping as appropriate. Ecology and DOE-RL are in discussions about re-designation of waste. The EA should be available for public review later this month.

- Dirk Dunning asked if going from transfer to disposal would be under another EIS. Mike Collins explained that DOE-RL did the EA for the analysis. The 15,000 drums probably contain mostly contact-handled TRU. The Solid Waste EIS addresses the LLW to be stored at Hanford.
- Gordon Rogers inquired about the assay of the drums. Mike said that uncovered drums from the past two years have been assayed.
- Does this EA cover all the suspect TRU onsite? No, just a portion of the TRU and the LLW burial grounds.
- Does this EA relate to the TPA? Partly – the M-91 milestone was to build a facility over a trench. That activity was supposed to remove a large number of drums to assay them.
- Pete Knollmeyer, DOE-RL, explained that the pre-1970 TRU could be at a range of strength levels; a CERCLA decision will evaluate whether it can be left in the ground. The post-1970s TRU will be shipped to the Waste Isolation Pilot Plant (WIPP).
- Why is this EA being conducted? Mike Collins said in 1988 a record of decision (ROD) was issued for the Hanford Defense Waste EIS, which said to remove all TRU and ship it to WIPP. This was a programmatic EIS, so it did not include many details. DOE-RL wanted to know what to expect, so it chose to conduct an EA. If the EA finds that there are Findings of Significant Impact it may drive how the work is done, but not what is done.

New Trenches EA

DOE-RL intended to replace trenches as others were used and filled. DOE-RL would like to keep several trenches open at once to segregate by package type and allow several crews to work simultaneously. The EA was to analyze the impacts of construction on four LLW trenches in the interest of optimizing disposal. DOE-RL has already had a public review and received several comments that are being incorporated into the document. There is no decision yet on whether to proceed with this action.

Pete Knollmeyer added that DOE-RL has enough capacity in existing trenches that new ones would not be needed until 2004-5, but it would like to add four more trenches to increase the efficiency of waste sorting.

- Pam Brown asked what happened to the Parks Township money. Mike Collins explained that it would be available until next September.
- Dennis Faulk asked about investigating doing lined trenches with leachate collection. Pete Knollmeyer said they have discussed it internally and with DOE-HQ. The positive outlook is that it would be a good analysis to add to the EIS. The bad side is that it would lengthen the EIS process. This would be a facility like the Environmental Restoration Disposal Facility (ERDF) and would have lined trenches and a leachate collection system.
- Dirk Dunning asked if the Systems Assessment Capability (SAC) results have been included in the EA and EIS. He was specifically commenting on technetium, uranium, and iodide plumes in the groundwater. Pete Knollmeyer said the data from SAC are being included. There are strict limits regarding packaging for uranium and technetium.

SW-EIS

Mike Collins explained that the purpose of the SW-EIS is to update existing National Environmental Protection Act (NEPA) documents and build deeper and larger trenches. The SW-EIS analyzes three types of waste: LLW, Mixed-LLW, and post-1970 TRU. It considers each waste stream individually, rather than site-wide. He described both the Action and No Action Alternatives for all three waste types.

The SW-EIS will be available for public comment in April 2002; public meetings will occur in April and May.

- Gerry Pollet asked if there has there been any engineering or analysis work done on the alternatives, since many people have requested an analysis of alternatives. Pete Knollmeyer answered that there has been no dedicated analysis for this EIS effort. If DOE-RL included such an analysis, it could draw on other efforts such as ERDF.

Plutonium Finishing Plant (PFP) Negotiations

Issue Manager Dirk Dunning introduced the issue by explaining that the Tri Party Agreement (TPA) agencies have been trying to begin negotiations for milestones to accelerate the cleanup of PFP. He also reported that he and other issue managers had received a very complete, detailed tour of the PFP facility. It inspired an appreciation of how difficult it is to get into the plant to do the work.

Larry Romano, DOE-RL, reported that DOE-RL and Ecology recently met to prepare for the negotiations. DOE-RL drafted and submitted an Agreement in Principle. Additional discussions have begun to establish ground rules for negotiation and better define interests and values. Meetings will be scheduled from November through mid-February

as needed. The end date for negotiations is February 22nd. The DOE-RL-authored fact sheet was adopted. Milestone W-460 was completed last Friday, the last processing line to come online to support stabilization.

Regulator Perspective
Rick Bond, Ecology, commented that there is nothing to report on negotiations, but Ecology is pleased so far. There is an Integrated Project Management Plan (IPMP). In general there are a few points to work on, but Ecology is pleased with the timeline. He noted that the negotiations tie into the issue of waste transport.

Committee Discussion
The committee asked whether the TPA agencies need advice. Larry said the current EIS covers stabilization of material and cleaning out the facility. DOE-RL would like to consolidate the nuclear material into a vault that could be a standalone facility. Pete Knollmeyer said public values could be considered for the final state of the facility; the HAB could give input on that topic. The committee requested a copy of the AIP.

- Keith Smith asked what the effect at Hanford would be since the governor of Georgia has refused to accept plutonium at Savannah River. Larry Romano said DOE-RL still plans to ship plutonium in 2008, but is looking at alternatives.
- Dave Watrous asked about a committee of the federal government asking for nuclear material to go to Savannah River. Larry was not aware of it. Dave Watrous will send the document to Pete Knollmeyer and Larry Romano.
- Shelley Cimon would like milestones with tight, aggressive timelines.
- Are there waste plumes under the facility? Tests are currently being conducted.
- Pam Brown asked for an update on Tank Z3-61. Dennis Faulk, EPA, said characterization is done and the tank poses no imminent threat. EPA has asked DOE-RL to do an Alternatives Analysis.
- Pam Brown asked about the cribs. Dennis Faulk said a report on the major contamination sources is due in December. Pete Knollmeyer, DOE-RL, speculated that a major source of carbon tetrachloride might be under PFP. Drilling inside the PFP fence to determine that will be finished around January or February.
- Madeleine Brown asked how many people work at PFP. About 500, with 100 support staff. Madeleine hopes PFP closes just as those workers retire so no jobs will be lost. Pete Knollmeyer assured her that the labor forecast is well-thought out and included in the IPMP.

Pete Knollmeyer announced that Hanford Communities conducted a community session on PFP that will be aired on public access cable. Pam Brown volunteered to get copies for anyone interested.

300 Area Deactivation and Decommissioning (D&D)

Dave Evans, DOE-RL, provided a project summary of the 300 Area portion of the River Corridor Project Plan. The vision is to dismantle the 300 Area Complex, north of Cypress Street (with the exception of Pacific Northwest National Lab) by 2012. The prerequisite

activity is a regulatory approach with Comprehensive Environmental Restoration Liability Act (CERCLA)/Resource Conservation and Recovery Act (RCRA) integration. DOE-RL is entering negotiation with the regulators. There is an interim Record of Decision (ROD) for the 300-FF-2 Operable Unit. There is also an Environmental Engineering/Cost Analysis (EE/CA) process, National Historic Preservation Act, and Tribal Involvement. The intention is to remove most buildings, but limited utilities will be left in place to support laboratory operations.

Dave Evans described the FY2001 Activities. Bechtel's Environmental Restoration contract 300 Area work scope included removing uranium oxide powder drums from the 618-4 burial ground. About 338 drums were excavated. Mike Goldstein, EPA, said all liquid areas will remain in 618-4. Every drum was sampled and met Land Disposal Restriction (LDR) sample requirements. Gerry Pollet expressed concern because the drums were referred to as the depleted uranium drums. Fluor Hanford completed significant work on B-Cell cleanout, uranium disposition, removed two water towers, and demolished building 303-K. Wherever useful, uranium was shipped (before the shipping restrictions were implemented) to other DOE sites where it could be used. He noted that Fluor found some contamination on the windmill. DOE-RL also developed a River Corridor draft Request for Proposal (RFP).

FY2002 activities will be to develop a final RFP for the River Corridor contract (a draft is available on the internet); Bechtel will finish excavation of the 618-4 burial ground and start excavating the 618-5 burial ground; and Fluor will work on cleaning and removing the 324 and 327 buildings.

The TPA agencies have produced an Agreement in Principle, which says that the parties will begin negotiations about remediation of the 100 and 300 Areas. The agencies also agreed to complete public review and sign off any TPA changes by April 30, 2002 and recognized the DOE-RL strategy to complete major portions of the River Corridor by 2012 through the River Corridor Contract.

Committee Discussion/Questions

- When is there opportunity for public comment on the draft RFP? Beth Bilson, DOE-RL, said a tentative agreement would be issued in January. Information had been provided at the November Hanford Advisory Board (HAB) meeting about how the RFP fits in with other negotiations.
- Robin Klein commented that it is useful to list what is not included in the RFP, since that is of public concern. Beth Bilson emphasized it is the same scope of work that has been discussed for the last year.
- Dirk Dunning asked about 618-10 and 618-11 and was informed that they are not in the scope of this RFP.
- Pam Brown commented that some buildings in the 300 Area are blocked off with radioactivity signs. Is there a comfort level where signs are fixed to walls? DOE-RL expressed confidence in its contractors. Beth Bilson added that one reason for including the 300 Area in Phase II of the contract is because additional planning is needed.

- Gerry Pollet asked if anyone has analyzed the potential schedule delay or cost increase related to beryllium. Dave Evans said Bechtel had to go back and study the beryllium requirements. The 300 Area accelerated closure plan (ACP) has been studied.

Systems Assessment Capability (SAC), Revision 0

Bob Price and Charley Kincaid from PNNL were present to discuss Revision 0 of the Systems Assessment Capability (SAC). Issue Manager Shelley Cimon commented that Fluor would be taking over the SAC and intends to use an observational approach to study groundwater cleanup.

BACKGROUND

The objective of SAC is to assess the cumulative impact of Hanford on human health, ecological, economic, and cultural systems. It is a tool used to look at different cleanup options and is meant to provide information on an aggregate area scale, not on individual waste sites. The analysis is focused on the vadose zone, groundwater, and Columbia River. Although atmospheric and terrestrial biological transport will be analyzed, they were not included in the initial assessment in the interest of simplicity.

SAC (Rev. 0) is the initial set of tools and data being assembled to demonstrate the approach being taken to show the cumulative assessment at Hanford. SAC (Rev. 1) will be an improved set of software driven by requirements identified by regulators and stakeholders to support decisions. Since past criticism has centered on only looking at one type of waste or one site, over 890 Hanford waste sites have been included in this model. To reduce complexity, Rev 0 does not include pump and treat systems. The time period of the assessment is from 1944 through 3050 AD. It considers 10 radioactive and chemical constituents and covers the Hanford Site from Rattlesnake Mountain to the Columbia River and the Columbia River from the Vernita Bridge to McNary Dam.

RESULTS

Bob Price and Charley Kincaid presented the results of the SAC (Rev. 0) Initial Assessment on a projected computer screen. Tritium is well-analyzed and thus provides a good sense of the accuracy of the model, which revealed that the three-dimensional model represents more accurate groundwater transport than the two-dimensional model. Cesium models were also analyzed. Very little cesium reaches the aquifer because it is absorbed in the vadose zone.

Carbon tetrachloride is a big concern at Hanford. A one-dimensional model does not show the lateral changes in the vadose zone, but the three-dimensional SAC prediction for 2000 matched fairly closely to results from monitoring. The model shows discharge into the Columbia River, assuming no retardation or degradation. When moderate levels of retardation and degradation are included, the plume does not leave the 200 West Area. This suggests it is important to characterize the retardation and degradation constants for Hanford soils.

To assess human health impacts, the model assumes the ingestion of two liters drinking water. The analysis shows which contaminants contribute to dose through time, which is useful because it shows the broad range of contaminants on the site. This helps understand the long-term risk drivers. The model also considers the waste contributions from different waste sites, measured by total mass in the aquifer. It is also possible to examine which regions most contribute to contamination in the groundwater. Instead of ignoring the waste from sites without good records, PNNL estimated other contaminants based on the ratio of fission products for fuel. Although the model does show the impact on health, that portion of the assessment was not shared due to calculation errors.

FY02 plans for SAC include incorporating the three-dimensional groundwater model, updating the inventory, upgrading the computing capability to produce faster results, and rerunning the initial assessment and variations. For a longer-term plan, DOE-RL will perform an assessment in 2004 and then document the results as a DOE-HQ deliverable in 2005.

Committee Discussion/Questions

- Dirk Dunning asked if the vadose transport analysis would include horizontal movement. Yes.
- Greg deBruler asked if there is any modeling for chromium and strontium-90 on the River Corridor. Bob Price answered that the SAC showed waste from all sites, but did not include pump and treat. A lot of strontium-90 reaches the river. Greg asked if the model takes into consideration the sodium plume moving toward the strontium plume and whether the sodium changes absorption. Bob Price said a key aspect of the model is the Columbia River groundwater interaction as the river level rises and falls.
- Greg deBruler asked if the model takes into assumption the removal of dams or potential flooding over the next 1000 years, the length of the prediction. Bob Price answered that the SAC assumes the river is run as it is now and that the local population and ecological species stay the same over a 1000-year period. Doing so provides a basis to compare the impacts of various remediation strategies. Greg deBruler urged PNNL to model the impacts of dam removal and climactic change.
- Shelley Cimon commented that the National Academy of Sciences panel recommended flooding and fire be included in this assessment. Bob Price responded that the modelers have considered the impact of range fires. They are still considering the recommendations regarding flooding and other catastrophic events; this accompanies consideration of whether SAC is an extensive tool or something less complicated. Moses Jarassyi, Bechtel, suggested that it might be more efficient to refine the model to see how it depicts reality within the vadose zone and groundwater before adding that level of complexity.
- Gordon Rogers announced that he had distributed a summary from the National Academy of Sciences peer review and the outbrief presentation from the Hanford Site Integration Project Expert Panel September 28, 2001 meeting. Moses added that the final report would be available 60-90 days after that meeting.

- Jim Curdy asked if the chemical composition of the waters of the Columbia River had been studied. Bob Price responded that the river had been modeled for background concentrations for contaminants above Hanford as well as pre-1944 data. The modelers did have to use some surrogate information and expressed interest in more extensive reports. Jim Curdy reported that the U.S. Geological Survey took monthly reports.
- Jim Curdy asked how frequently wells are monitored. John Morse, DOE-RL, said that there are about 1000 wells and about 700 are monitored per year, including those associated with active pump and treat and monitoring for onsite and offsite radiation. Some wells are sampled quarterly or annually, depending on activities. DOE-RL generates plume maps every year.
- Pam Brown asked if SAC links into the SW-EIS. Yes, SAC will be consistent with what the EIS projects. Pam suggested the modelers share their information with the EIS staff.
- Dave Johnson asked if there is overlap between the SAC and Yucca Mountain. Yes, there is some collaboration.
- Dave Johnson asked about the effect on the model from the uncertainty associated with the LLW burial ground pre-1970 TRU. Charley Kincaid said the effect of the waste has been estimated. For the pre-1970 TRU, the modelers assigned upper bound numbers for particular isotopes (values are in the Solid Waste Inventory Tracking System database, which includes all solid waste burial ground records). The modelers allowed certain properties to vary, resulting in 25 realizations, making it possible to examine a range.
- Pam Brown asked about the source of funding for SAC. Bob Price explained that SAC is currently part of Bechtel but there has been no formal detailed planning beyond this fiscal year. John Morse, DOE-RL, added that DOE-RL has a specific PBS for this project. The baseline for Fluor shows this program extending through the life of its contract.
- Pam asked if the project is tied in with the Idaho National Environmental and Engineering Laboratory, since it has the lead on groundwater issues for the DOE complex. No, although John Morse is involved with INEEL programmatic work.
- Dirk Dunning expressed concern that the conceptual model of the soil column is at odds with what really happens with the soil column. Bob Price disagreed.
- Shelley Cimon expressed concerned about Fluor's commitment to the project. John Morse assured the committee that both DOE-RL and Fluor are fully committed to the project.
- Greg deBruler asked about a draft document "Looking at Risk," which deals with eco-risk issues.
- Pam Brown asked about the vitrification plant and the estimate that it will increase the local population by 7000. Bob Price explained that such variables could be taken into account once the environmental side is established.

Bob Price estimated that a reassessment would be completed in six months.

Regulator Perspective
No regulator comments.

Follow up to November HAB meeting regarding Central Plateau Risk Framework

The committee evaluated what work it can defer to allow issue managers to devote their resources to the Ad Hoc Task Force. PFP, TRU, and the TPA milestone negotiations will be in public comment in January. The TRU Waste Retrieval EA will be issued for public review in November.

Committee Business

Topics for a possible January committee meeting are: updates and planning for public meetings (a cross cutting issue with the Public Involvement and Communications Committee). The committee will suggest an update on the SAC for the December HAB meeting or a January committee meeting. Issue Manager Dirk Dunning noted that the groundwater does not move the way the model predicts. The contamination moves down 40-50 feet, then slides sideways, but the model says it just goes down. Greg deBruler suggested a presentation on SAC with a subsequent discussion of the technical and scientific problems from different perspectives.

The EIMG call is at 3:00 pm on Thursday, November 15th.

Handouts

- River and Plateau Committee Draft Meeting Agenda; November 7, 2001.
- DOE-RL's Status of Waste Management NEPA Documentation; November 2001.
- PNNL's Groundwater Vadose Zone Integration Project on System Assessment Capability; November 7, 2001.
- Presentation by Dr. Edgar Berkey, Hanford Site Integration Project Expert Panel Outbrief Presentation Panel Meeting #10; September 28, 2001.
- National Academy of Sciences Peer Review; November 7, 2001.
- DOE-RL Project Summary of the 300 Area part of the River Corridor Project Plan; November 7, 2001.

Attendees

HAB Members and Alternates

Madeleine Brown	Harold Heacock	Denny Newland
Pam Brown	Dave Johnson	Gordon Rogers
Shelley Cimon (phone)	Robin Klein	Keith Smith
Jim Curdy	Susan Leckband	John Stanfill
Greg deBruler	Maynard Plahuta	Leon Swenson
Dirk Dunning	Gerry Pollet	Dave Watrous

Others

Beth Bilson, DOE-RL	Dennis Faulk, EPA	Bruce Ford, BHI
Michael Collins, DOE-RL	Rick Bond, Ecology	Moses Jarassyi, BHI

Ellen Dagan, DOE-RL	Max Power, Ecology	Nancy Myers, BHI
Dave Evans, DOE-RL		Penny Mabie, EnviroIssues
Pete Knollmeyer, DOE-RL		Christina Richmond, EnviroIssues
Gail McClure, DOE-RL		Kristy Collins, Informatics
Larry Romine, DOE-RL		Gloria Cummins, FH
		Rob Piippo, FH
		Bob Bryce, PNNL
		Charley Kincaid, PNN:
		Dick Jaquish, WDOH
		Les Davenport